Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	196	photorhabdus	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/01/05 15:51
L2	4244	tcd\$	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/01/05 15:51
L3	505	tcd\$ and toxin	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/01/05 15:51

FILE 'HOME' ENTERED AT 14:49:38 ON 05 JAN 2006

- => file biosis caplus caba agricola
- => s tcd?
- L1 17452 TCD?
- => s tcdb? or tcdA?
- L2 288 TCDB? OR TCDA?
- => duplicate remove 12
- L3 202 DUPLICATE REMOVE L2 (86 DUPLICATES REMOVED)
- => d ti 1-50
- L3 ANSWER 1 OF 202 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Facile method to detect oligonucleotides with functionalized polydiacetylene vesicles
- L3 ANSWER 2 OF 202 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Insecticidal toxin complex fusion proteins and their use in transformation of plants for improved insect resistance
- L3 ANSWER 3 OF 202 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Use of untranslated regions of the osmotin gene to increase levels of transgene expression in plants
- L3 ANSWER 4 OF 202 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
- TI Multilocus sequence analysis and comparative evolution of virulence-associated genes and housekeeping genes of Clostridium difficile.
- L3 ANSWER 5 OF 202 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Prevalence of the ermB gene in Clostridium difficile strains isolated at a University Teaching Hospital from 1987 through 1998
- L3 ANSWER 6 OF 202 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
- TI Absolute quantification in dopaminergic neurotransmission SPECT using a Monte Carlo-based scatter correction and fully 3-dimensional reconstruction.
- L3 ANSWER 7 OF 202 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Controlled Polymerization of Substituted Diacetylene Self-Organized Monolayers Confined in Molecule Corrals
- L3 ANSWER 8 OF 202 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
- TI LuxS/autoinducer-2 quorum sensing molecule regulates transcriptional virulence gene expression in Clostridium difficile.
- L3 ANSWER 9 OF 202 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Controlled polymerization of substituted diacetylene self-assembled monolayers confined in molecule corrals
- L3 ANSWER 10 OF 202 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Clonal spread of a Clostridium difficile strain with a complete set of toxin A, toxin B, and binary toxin genes among Polish patients with Clostridium difficile-associated diarrhea
- L3 ANSWER 11 OF 202 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
- TI Potentiation and cellular phenotypes of the insecticidal Toxin complexes of Photorhabdus bacteria.
- L3 ANSWER 12 OF 202 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
- TI Clostridium difficile in emergency room.

- L3 ANSWER 13 OF 202 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
- TI Clostridium difficile toxins: Mechanism of action and role in disease.
- L3 ANSWER 14 OF 202 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
- TI Characterization of the cleavage site and function of resulting cleavage fragments after limited proteolysis of Clostridium difficile toxin B (TcdB) by host cells.
- L3 ANSWER 15 OF 202 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
- TI A survey of metronidazole and vancomycin resistance in strains of Clostridium difficile isolated in Warsaw, Poland.
- L3 ANSWER 16 OF 202 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
- TI Coexistence of multiple PCR-ribotype stains of Clostrdium difficile in faecal samples limits epidemioligical.
- L3 ANSWER 17 OF 202 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
- TI Statins potentiate the IFN-gamma-induced upregulation of group IIA phospholipase A(2) in human aortic smooth muscle cells and HepG2 hepatoma cells.
- L3 ANSWER 18 OF 202 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Detection of binary-toxin genes (cdtA and cdtB) among Clostridium difficile strains isolated from patients with C. difficile-associated diarrhoea (CDAD) in Poland
- L3 ANSWER 19 OF 202 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
- TI Effect of phage infection on toxin production by Clostridium difficile.
- L3 ANSWER 20 OF 202 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
- TI Up-regulation of RhoB protein by glucosylating toxins.
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- TI The catalytic domain of native large clostridial cytotoxins escapes antitoxin detection.
- L3 ANSWER 22 OF 202 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
- TI Difference in the protein substrate specificity between Clostridium sordellii lethal toxin and variant Clostridium difficile toxin B 1470.
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- TI Revised nomenclature of Clostridium difficile toxins and associated genes
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- TI Transferase-dependent and -independent effects of clostridium difficile toxin A on inflammatory genes of HMC-1 mast cells.
- L3 ANSWER 26 OF 202 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
- TI Involvement of p38 mapk in Clostridium difficile toxin B-induced activation of human mast cells.
- L3 ANSWER 27 OF 202 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
- TI Transgenic plants expressing photorhabdus toxin.
- L3 ANSWER 28 OF 202 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Combinations of insecticidal proteins from Xenorhabdus, Photorhabdus, and Paenibacillus for broad range control of insects
- L3 ANSWER 29 OF 202 CAPLUS COPYRIGHT 2006 ACS on STN
- TI DNA sequences from tcd genomic region of Photorhabdus luminescens and their use for production of recombinant, orally-active insect toxins

- L3 ANSWER 30 OF 202 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Pesticidal proteins active against Lepidoptera and the genes encoding them from Paenibacillus species
- L3 ANSWER 31 OF 202 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Non-toxic antigenic mutant/modified Clostridium difficile TcdB toxin polypeptides, their sequences, recombinant production, and use in constructing vaccines for treatment of infections
- L3 ANSWER 32 OF 202 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 10
- TI Multiplex PCR targeting tpi (triose phosphate isomerase), tcdA (toxin A), and tcdB (toxin B) genes for toxigenic culture of Clostridium difficile
- L3 ANSWER 33 OF 202 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Template-Induced Inclusion Structures with Copper(II) Phthalocyanine and Coronene as Guests in Two-Dimensional Hydrogen-Bonded Host Networks
- L3 ANSWER 34 OF 202 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Community-acquired Clostridium difficile diarrhea caused by binary toxin, toxin A, and toxin B gene-positive isolates in Hungary
- L3 ANSWER 35 OF 202 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 11
- TI Multilocus sequence typing analysis of human and animal Clostridium difficile isolates of various toxigenic types
- L3 ANSWER 36 OF 202 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Prevalence and characterization of a binary toxin (actin-specific ADP-ribosyltransferase) from Clostridium difficile
- L3 ANSWER 37 OF 202 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Characterization of toxin A-negative, toxin B-positive Clostridium difficile isolates from outbreaks in different countries by amplified fragment length polymorphism and PCR ribotyping
- L3 ANSWER 38 OF 202 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
- TI Distribution of Clostridium difficile variant toxinotypes and strains with binary toxin genes among clinical isolates in an American hospital.
- L3 ANSWER 39 OF 202 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Constrained Geometry Tetramethylcyclopentadienyl-phenoxytitanium Dichlorides: Template Synthesis, Structures, and Catalytic Properties for Ethylene Polymerization
- L3 ANSWER 40 OF 202 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Water resistance and optical properties of optical adhesives containing strong hydrophobic components
- L3 ANSWER 41 OF 202 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
- TI Aryl hydrocarbon receptor response to indigoids in vitro and in vivo.
- L3 ANSWER 42 OF 202 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
- TI Cloning and expression of Clostridium difficile toxin A gene (tcdA) by PCR amplification and use of an expression vector.
- L3 ANSWER 43 OF 202 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation onSTN
- TI Allo-antigen expression on both APCS and tumor is required to elicit an effective GVL response after experimental allogeneic BMT.
- L3 ANSWER 44 OF 202 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Cytotoxicity and antimicrobial susceptibility of Clostridium difficile isolated from hospitalized children with acute diarrhea
- L3 ANSWER 45 OF 202 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
- TI Rapid diagnosis of Clostridium difficile-associated diarrhea using

real-time PCR.

- L3 ANSWER 46 OF 202 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
- TI Comparative study of thermoresistance spores of Clostridium diffiicle strains belonging to the different toxigenicity groups.

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- L3 ANSWER 47 OF 202 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Transport genes of Chromobacterium violaceum: an overview
- L3 ANSWER 48 OF 202 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
- TI The IStron CdISt1 of Clostridium difficile: molecular symbiosis of a group I intron and an insertion element.
- L3 ANSWER 49 OF 202 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Chromatic immunoassay based on polydiacetylene vesicles
- L3 ANSWER 50 OF 202 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation onSTN
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- AN 2004:249658 BIOSIS
- DN PREV200400249612
- TI Transgenic plants expressing photorhabdus toxin.
- AU Petell, James K. [Inventor, Reprint Author]; Merlo, Donald J. [Inventor]; Herman, Rod A. [Inventor]; Roberts, Jean L. [Inventor]; Guo, Lining [Inventor]; Schafer, Barry W. [Inventor]; Sukhapinda, Kitisri [Inventor]; Merlo, Ann Owens [Inventor]
- CS ASSIGNEE: Dow AgroSciences LLC
- PI US 6717035 20040406
- Official Gazette of the United States Patent and Trademark Office Patents, (Apr 6 2004) Vol. 1281, No. 1. http://www.uspto.gov/web/menu/patdata.html.e-file.
 - ISSN: 0098-1133 (ISSN print).
- DT Patent
- LA English
- ED Entered STN: 6 May 2004 Last Updated on STN: 6 May 2004
- AB Novel polynucleotide sequences that encode insect toxins TcdA and TcbA have base compositions that differ substantially from the native genes, making them more similar to plant genes. The new sequences are suitable for use for high expression in both monocots and dicots. Transgenic plants with a genome comprising the nucleic acid of SEQ ID NO:4 are insect resistant.
- L3 ANSWER 28 OF 202 CAPLUS COPYRIGHT 2006 ACS on STN
- AN 2004:650083 CAPLUS
- DN 141:186449
- TI Combinations of insecticidal proteins from Xenorhabdus, Photorhabdus, and Paenibacillus for broad range control of insects
- IN Hey, Timothy D.; Schleper, Amanda D.; Bevan, Scott A.; Bintrim, Scott B.; Mitchell, Jon C.; Li, Ze Sheng; Ni, Weiting; Zhu, Baolong; Merlo, Donald J.; Apel-Birkhold, Patricia C.
- PA Dow Agrosciences LLC, USA
- SO PCT Int. Appl., 368 pp.
- CODEN: PIXXD2
- DT Patent
- LA English
- FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
						
PΙ	WO 2004067727	A2	20040812	WO 2004-US394	20040107	

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            AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI
     CA 2514041
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    EP 1585819
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             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
PRAI .US 2003-441723P
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    WO 2004-US394
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AB Mixts. of bacterial toxin complex (TC) proteins from Xenorhabdus, Photorhabdus, and Paenibacillus, can be used in combination with one another and can act act synergistically to improve insecticidal activity. The TC proteins from these genera act against different ranges of insects, therefore, these mixts. show increased effectiveness against a broader range of insects than the individual proteins. Certain preferred combinations of TC proteins are disclosed. Synergism between proteins from different sources was found during coexpression of cloned genes in an Escherichia coli host. Not all combinations were effective, with some showing no activity, but with the addition of an addnl. protein raising mortality in feeding expts. from 0-10% to 80-100%.

- L3 ANSWER 11 OF 202 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
- AN 2005:165259 BIOSIS
- DN PREV200500164562
- TI Potentiation and cellular phenotypes of the insecticidal Toxin complexes of Photorhabdus bacteria.
- AU Waterfield, N.; Hares, M.; Yang, G.; Dowling, A.; ffrench-Constant, R. [Reprint Author]
- CS Ctr Mol Microbiol, Univ Bath, Bath, Avon, BA2 7AY, UK bssrfc@bath.ac.uk
- SO Cellular Microbiology, (March 2005) Vol. 7, No. 3, pp. 373-382. print. ISSN: 1462-5814 (ISSN print).
- DT Article
- LA English
- ED Entered STN: 27 Apr 2005 Last Updated on STN: 27 Apr 2005
- The toxin complex (tc) genes of bacteria comprise a large and growing AB family whose mode of action remains obscure. In the insect pathogen Photorhabdus, to genes encode high molecular weight insecticidal toxins with oral activity against caterpillar pests. One protein, TcdA , has recently been expressed in transgenic plants and shown to confer insect resistance. These toxins therefore represent alternatives to toxins from Bacillus thuringiensis (Bt) for deployment in transgenic crops. Levels of TcdA expression in transgenic plants were, however, low and the full toxicity associated with the native toxin was not reconstituted. Here we show that increased activity of the toxin TcdA1 requires potentiation by either of two pairs of gene products, TcdB1 and TccC1 or TcdB2 and TccC3. Moreover, these same pairs of proteins can also cross-potentiate a second toxin, TcaAlBl. To elucidate the likely functional domains present in these large proteins, we expressed fragments of each 'toxin' or 'potentiator' gene within mammalian cells. Several domains produced abnormal cellular morphologies leading to cell death, while others showed specific phenotypes such as nuclear translocation. Our results prove that the Tc toxins are complex proteins with multiple functional domains. They also show that both toxin genes and their potentiator pairs will need to be expressed to reconstitute full activity in insect-resistant transgenic plants. Moreover, they suggest that the same potentiator pair will be able to cross-potentiate more than one toxin in a single plant.

- L4 17265 L1 NOT CLOSTRIDIUM
- => s tcd? not Clostridium
- L5 17265 TCD? NOT CLOSTRIDIUM
- => s tc? and photorhabdus
- L6 78 TC? AND PHOTORHABDUS
- => duplicate remove 16
- L7 39 DUPLICATE REMOVE L6 (39 DUPLICATES REMOVED)
- => d ti 1-39
- L7 ANSWER 1 OF 39 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Insecticidal toxin complex fusion proteins and their use in transformation of plants for improved insect resistance
- L7 ANSWER 2 OF 39 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Use of untranslated regions of the osmotin gene to increase levels of transgene expression in plants
- L7 ANSWER 3 OF 39 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
- TI Homologues of insecticidal toxin complex genes in Yersinia enterocolitica biotype 1A and their contribution to virulence.
- L7 ANSWER 4 OF 39 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
- TI Potentiation and cellular phenotypes of the insecticidal Toxin complexes of **Photorhabdus** bacteria.
- L7 ANSWER 5 OF 39 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Insecticidal toxins from Photorhabdus and Xenorhabdus
- L7 ANSWER 6 OF 39 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
- TI Transgenic plants expressing photorhabdus toxin.
- L7 ANSWER 7 OF 39 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Xenorhabdus toxin complex proteins and genes for pest control
- L7 ANSWER 8 OF 39 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Combinations of insecticidal proteins from Xenorhabdus,
 Photorhabdus, and Paenibacillus for broad range control of insects
- L7 ANSWER 9 OF 39 CAPLUS COPYRIGHT 2006 ACS on STN
- TI DNA sequences from tcd genomic region of Photorhabdus luminescens and their use for production of recombinant, orally-active insect toxins
- L7 ANSWER 10 OF 39 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Pesticidal proteins active against Lepidoptera and the genes encoding them from Paenibacillus species
- L7 ANSWER 11 OF 39 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
- TI Cloning and heterologous expression of a novel insecticidal gene (tccC1) from Xenorhabdus nematophilus strain.
- L7 ANSWER 12 OF 39 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
- TI DNA sequences from photorhabdus luminescens.
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- TI Immunogenic peptides, encoding polynucleotides, and binding antibodies for identifying immunogenic peptide-based on three dimensional structure
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- TI Insecticidal toxins from **Photorhabdus** and the genes encoding them and their uses
- L7 ANSWER 16 OF 39 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Site-directed recombinase fusion proteins and corresponding polynucleotides, vectors and kits, and their uses for site-directed DNA recombination
- L7 ANSWER 17 OF 39 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
- TI Using a DNA microarray to investigate the distribution of insect virulence factors in strains of **Photorhabdus** bacteria.
- L7 ANSWER 18 OF 39 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Bacterial detection of the toxicity of dioxins, polychlorinated biphenyls, and polybrominated diphenyl ethers
- L7 ANSWER 19 OF 39 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
- TI Insect resistance conferred by 283-kDa **Photorhabdus** luminescens protein **Tcd** A in Arabidopsis thaliana.
- L7 ANSWER 20 OF 39 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
- TI Specific responses of bacterial cells to dioxins.
- L7 ANSWER 21 OF 39 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Photorhabdus luminescens strain W-14 genes tcdB and tccC2, their DNA sequences and use in production of insecticidal toxins A and B in transgenic plants
- L7 ANSWER 22 OF 39 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Genomic islands in Photorhabdus
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- TI Bacterial infection of a model insect: **Photorhabdus** luminescens and Manduca sexta.
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- TI Transgenic plants expressing **Photorhabdus** toxins **TcdA** and **TcbA** for increased resistance to insect pests
- L7 ANSWER 25 OF 39 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
- TI Measuring virulence factor expression by the pathogenic bacterium **Photorhabdus** luminescens in culture and during insect infection.
- L7 ANSWER 26 OF 39 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
- TI Oral toxicity of **Photorhabdus** luminescens W14 toxin complexes in Escherichia coli.
- L7 ANSWER 27 OF 39 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
- TI The tc genes of Photorhabdus: A growing family.
- L7 ANSWER 28 OF 39 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
- TI Cytopathic effect of SpvB, a Salmonella plasmid virulence protein, is mediated by its inherent ADP-ribosyltransferase activity.
- L7 ANSWER 29 OF 39 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
- TI A genomic sample sequence of the entomopathogenic bacterium **Photorhabdus** luminescens W14: Potential implications for virulence.
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- TI Novel insecticidal toxins from nematode-symbiotic bacteria.
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- TI The predicted structure of photopexin from **Photorhabdus** shows the first haemopexin-like motif in prokaryotes.

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- TI Insecticidal toxins from the bacterium **Photorhabdus** luminescens: gene cloning and toxin histopathology.
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- => s 15 and plant
- L8 464 L5 AND PLANT
- => duplicate remove 18
- L9 362 DUPLICATE REMOVE L8 (102 DUPLICATES REMOVED)
- => d ti 1-10
- L9 ANSWER 1 OF 362 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Insecticidal toxin complex fusion proteins and their use in transformation of plants for improved insect resistance
- L9 ANSWER 2 OF 362 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Use of untranslated regions of the osmotin gene to increase levels of transgene expression in plants
- L9 ANSWER 3 OF 362 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Parallel synthesis of a library of acylsemicarbazides using a solution-phase one-pot method and their evaluation as crop-protection agents
- L9 ANSWER 4 OF 362 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
- TI Cloning of resistance gene analogs located on the alien chromosome in an addition line of wheat-Thinopyrum intermedium.
- L9 ANSWER 5 OF 362 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
- TI Black tea theaflavins suppress dioxin-induced transformation of the aryl hydrocarbon receptor.
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- L9 ANSWER 7 OF 362 CABA COPYRIGHT 2006 CABI on STN DUPLICATE 4
- TI Bisindigotin, a TCDD antagonist from the Chinese medicinal herb

Isatis indigotica.

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- TI The plant flavonoid, quercetin, reduces some forms of dioxin toxicity by mechanism distinct from aryl hydrocarbon receptor activation, heat-shock protein induction and quenching oxidative stress.
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- TI Suppressive effects of caraway (Carum carvi) extracts on 2,3,7,8-tetrachloro-dibenzo-p-dioxin-dependent gene expression of cytochrome P450 1A1 in the rat H4IIE cells.
- L9 ANSWER 10 OF 362 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
- TI Potentiation and cellular phenotypes of the insecticidal Toxin complexes of Photorhabdus bacteria.
- => s 19 and insect?
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- L10 ANSWER 1 OF 28 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
- TI Potentiation and cellular phenotypes of the insecticidal Toxin complexes of Photorhabdus bacteria.
- L10 ANSWER 2 OF 28 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
- TI Transgenic plants expressing photorhabdus toxin.
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- TI Human-dominated ecosystems and restoration ecology: Seveso today.
- L10 ANSWER 5 OF 28 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
- TI Evaluation of dioxin mobility and spoils leaching in a surface coal mine reclaimed with bleached kraft pulp and paper mill biosolids.
- L10 ANSWER 6 OF 28 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
- TI Exposure to polychlorinated dioxins and furans (PCDD/F) and mortality in a cohort of workers from a herbicide-producing plant in Hamburg, Federal Republic of Germany.
- L10 ANSWER 7 OF 28 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
- TI HIGH-AFFINITY JUVENILE HORMONE BINDING TO FAT BODY CYTOSOLIC PROTEINS OF THE BOLLWORM HELIOTHIS-ZEA CHARACTERIZATION AND INTERACTION WITH ALLELOCHEMICALS AND XENOBIOTICS.
- L10 ANSWER 8 OF 28 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
- TI THE GENO TOXIC EFFECTS OF 2 4 5-T.
- L10 ANSWER 9 OF 28 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Parallel synthesis of a library of acylsemicarbazides using a solution-phase one-pot method and their evaluation as crop-protection agents
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- TI Insecticidal toxin complex fusion proteins and their use in transformation of plants for improved insect resistance
- L10 ANSWER 11 OF 28 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Use of untranslated regions of the osmotin gene to increase levels of transgene expression in plants
- L10 ANSWER 12 OF 28 CAPLUS COPYRIGHT 2006 ACS on STN

- TI Combinations of insecticidal proteins from Xenorhabdus, Photorhabdus, and Paenibacillus for broad range control of insects
- L10 ANSWER 13 OF 28 CAPLUS COPYRIGHT 2006 ACS on STN
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- L10 ANSWER 16 OF 28 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Utilization of a thermochemical process for destroying hazardous chemicals in sediment from harbor dredging operations
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- TI Novel methods for in vivo identification of enzyme inhibitors from random peptide-chymotrypsin inhibitor 2A (CI-2A) fusion library and their use in drug screening
- L10 ANSWER 19 OF 28 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Exposure to HCH and its effects on mortality. Observations in a cohort of former employees of a **plant** producing **insecticides** and herbicides in Hamburg
- L10 ANSWER 20 OF 28 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Insecticidal protein toxins from Photorhabdus luminescens
- L10 ANSWER 21 OF 28 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Manufacture of **plant** protection agents. What are the environmental problems?
- L10 ANSWER 22 OF 28 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Persistence, bioaccumulation, and toxicology of **TCDD** in an ecosystem treated with massive quantities of 2,4,5-T herbicide
- L10 ANSWER 23 OF 28 CABA COPYRIGHT 2006 CABI on STN
- TI Neurophysiological studies of flight-related density-dependent phase characteristics in locusts.
- L10 ANSWER 24 OF 28 CABA COPYRIGHT 2006 CABI on STN
- TI Neural correlates to flight-related density-dependent phase characteristics in locusts.
- L10 ANSWER 25 OF 28 CABA COPYRIGHT 2006 CABI on STN
- TI Insecticidal toxins from the bacterium Photorhabdus luminescens: gene cloning and toxin histopathology.
- L10 ANSWER 26 OF 28 CABA COPYRIGHT 2006 CABI on STN
- TI Pesticide induced biochemical changes in terrestrial insects, benthos and fish as markers of contamination of soils and waters.
- L10 ANSWER 27 OF 28 CABA COPYRIGHT 2006 CABI on STN
- TI Persistence, bioaccumulation and toxicology of **TCDD** in an ecosystem treated with massive quantities of 2,4,5-T herbicide.

- L10 ANSWER 28 OF 28 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2006) on STN
- TI VEGETATION MANAGEMENT WITH HERBICIDES IN THE EASTERN REGION.

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- L10 ANSWER 25 OF 28 CABA COPYRIGHT 2006 CABI on STN
- AN 2002:22240 CABA
- DN 20013072531
- TI Insecticidal toxins from the bacterium Photorhabdus luminescens: gene cloning and toxin histopathology
- AU Bowen, D.; Blackburn, M.; Rocheleau, T. A.; Andreev, O.; Golubeva, E.; Ffrench-Constant, R. H.; Smits, P. H. [EDITOR]
- CS Department of Entomology, University of Wisconsin-Madison, Madison, WI 53706, USA.
- SO Bulletin OILB/SROP, (2000) Vol. 23, No. 2, pp. 97-99. 16 ref. Publisher: International Organization for Biological Control of Noxious Animals and Plants (OIBC/OILB), West Palaearctic Regional Section (WPRS/SROP). Dijon Price: Journal article; Conference paper .

 Meeting Info.: Proceedings of the 7th European meeting of the IOBC/WPRS
 - Meeting Info.: Proceedings of the 7th European meeting of the IOBC/WPRS Working group: Insect pathogens and insect parasitic nematodes, entitled 'Capturing the potential of biological control', held in Vienna, Austria from March 22-26, 1999.
- CY France
- DT Journal
- LA English
- ED Entered STN: 20020207 Last Updated on STN: 20020207
- AB Four toxin complexes were from P. luminescens culture were purified, and the toxin complex-encoding loci, tca, tcb, tcc and tcd, were cloned. Genetic knockout of either tca or tcd residues reduced the oral toxicity of these toxins to Manduca sexta, and knockout of both loci eliminated the activity of the toxins. In bioassays, the purified Tca was specifically active in the insect midgut. These toxins may be useful alternatives to other active bacterial protein toxins.
- L10 ANSWER 21 OF 28 CAPLUS COPYRIGHT 2006 ACS on STN
- AN 1988:225994 CAPLUS
- DN 108:225994
- TI Manufacture of plant protection agents. What are the environmental problems?
- AU Foraboschi, Franco P.
- CS Fac. Ing., Univ. Bologna, Bologna, Italy
- SO ICP (1988), 16(4), 35-42 CODEN: ICPDDL; ISSN: 0390-2358
- DT Journal; General Review
- LA Italian
- AB A review, with 73 refs., on health hazards in the manufacture of chlorinated and phosphorated insecticides and the environmental effects of their release, including the TCDD pollution at Seveso, Italy.
- L10 ANSWER 20 OF 28 CAPLUS COPYRIGHT 2006 ACS on STN
- AN 1998:165497 CAPLUS
- DN 128:214446
- TI Insecticidal protein toxins from Photorhabdus luminescens
- IN Ensign, Jerald C.; Bowen, David J.; Petell, James; Fatig, Raymond;
 Schoonover, Sue; Ffrench-Constant, Richard H.; Rocheleau, Thomas A.;
 Blackburn, Michael B.; Hey, Timothy D.; Merlo, Donald J.; Orr, Gregory L.;
 Roberts, Jean L.; et al.
- PA Dow Agrosciences LLC, USA; Wisconsin Alumni Research Foundation
- SO PCT Int. Appl., 321 pp. CODEN: PIXXD2

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DT
      Patent
LA
      English
FAN.CNT 3
      PATENT NO.
                            KIND
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                                                APPLICATION NO.
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                                    19980305 WO 1997-US7657
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      WO 9808932
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          W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE,
          SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
      WO 9717432
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               EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR,
               LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU,
               SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, AM, AZ, BY,
               KG, KZ, MD, RU, TJ, TM
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               MR, NE, SN, TD, TG
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      EP 970185
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JP 2003-197785 20030716
      Proteins from the genus Photorhabdus are toxic to insects upon
AB
      exposure. Photorhabdus luminescens (formerly Xenorhabdus luminescens)
      have been found in mammalian clin. samples and as a bacterial symbiont of
      entomopathogenic nematodes of genus Heterorhabditis. The native toxins
      are protein complexes that are produced and secreted by growing bacteria.
      The protein complexes, with a mol. size of .apprx.1000 kDa, can be separated
      by SDS-PAGE gel anal. into numerous component proteins. The toxins
      contain no hemolysin, lipase, type C phospholipase, or nuclease
      activities, but exhibit significant toxicity upon exposure administration
      to a number of insects. PCR cloning yielded gene sequences (tca,
      tcb, tcc, and tcd regions) encoding the insecticidal
      toxins from P. luminescens strain W-14 and several other strains.
      protein toxins can be applied to, or genetically engineered into,
      insect larvae food and plants for insect control.
RE.CNT 3
               THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
                ALL CITATIONS AVAILABLE IN THE RE FORMAT
L10
     ANSWER 15 OF 28 CAPLUS COPYRIGHT 2006 ACS on STN
      2002:466761 CAPLUS
AN
      137:42657
DN
ΤI
      Photorhabdus luminescens strain W-14 genes tcdB and tccC2, their
      DNA sequences and use in production of insecticidal toxins A and
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French-Constant, Richard H.; Bowen, David; Rocheleau, Thomas A.;

Wisconsin Alumni Research Foundation, UK; University of Bath

B in transgenic plants

Waterfield, Nicholas R.

CODEN: USXXCO

U.S. Pat. Appl. Publ., 40 pp.

IN

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DT Patent LA English

FAN.CNT 1

21200	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002078478 US 6639129	A1 B2	20020620 20031028	US 2001-817514	20010326
PRAI	US 2005251878 US 2000-191806P US 2001-817514	A1 P A3	20051110 20000324 20010326	US 2003-647956	20030826

The invention provides DNA mols. for genes tcdB and tccC2 from AB Photorhabdus luminescens strain W-14, which encode components of a toxin complex previously shown to have oral toxicity against insects. The invention also provides for the use of said DNA mols., along with DNA mols. for genes tcdA or tcbA, for recombinant production of insecticidal toxins A and B in heterologous hosts, such as plants. The invention further provides transgenic plants, such as rice, maize, tobacco and cotton, containing said P. luminescens insecticidal toxin genes tcdB and tccC2, and seed or progeny of seed from said transgenic plants. Finally, the invention discloses the DNA and amino acid sequences of P. luminescens gene tcdB and tccC2 toxin components, as well as the amino acid sequences of gene ${\tt tcdA}$ and tcbA toxin components. The invention discussed how said genes, methods and transgenic plants could be used to enhance resistance to insects in the field. The invention also discussed that coexpression of tcdB and tccC2 with tcdA or tcbA in heterologous hosts results in enhanced levels of oral insect toxicity.

- L10 ANSWER 14 OF 28 CAPLUS COPYRIGHT 2006 ACS on STN
- AN 2003:764632 CAPLUS
- DN 140:1884
- TI Insect resistance conferred by 283-kDa Photorhabdus luminescens protein TcdA in Arabidopsis thaliana
- AU Liu, Dong; Burton, Stephanie; Glancy, Todd; Li, Ze-Sheng; Hampton, Ronnie; Meade, Thomas; Merlo, Donald J.
- CS Dow AgroSciences LLC, Indianapolis, IN, 46268, USA
- SO Nature Biotechnology (2003), 21(10), 1222-1228 CODEN: NABIF9; ISSN: 1087-0156
- PB Nature Publishing Group
- DT Journal
- LA English
- AΒ The tcdA gene of Photorhabdus luminescens encodes a 283-kDa protein, toxin A, that is highly toxic to a variety of insects, including some agriculturally important pests. We tested the efficacy of transgenic toxin A in Arabidopsis thaliana for control of feeding insects. Plants with toxin A expression above about 700 ng/mg of extractable protein were highly toxic to tobacco hornworm (Manduca sexta). Toxin A isolated from transgenic plants also strongly inhibited growth of the southern corn rootworm (Diabrotica undecimpunctata howardi). Addition of 5' and 3' untranslated regions of a tobacco osmotin gene (osm) increased toxin A production 10-fold and recovery of insect-resistant lines 12-fold. In the best line, high toxin A expression and insect resistance were maintained for at least five generations in all progeny. The intact tcdA mRNA represents the largest effective transgenic transcript produced in plants to date. These results may open a new route to transgenic pest control in agriculture.
- RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT
- L10 ANSWER 1 OF 28 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
- AN 2005:165259 BIOSIS
- DN PREV200500164562
- TI Potentiation and cellular phenotypes of the insecticidal Toxin complexes of Photorhabdus bacteria.
- AU Waterfield, N.; Hares, M.; Yang, G.; Dowling, A.; ffrench-Constant, R.

[Reprint Author]

- CS Ctr Mol Microbiol, Univ Bath, Bath, Avon, BA2 7AY, UK bssrfc@bath.ac.uk
- SO Cellular Microbiology, (March 2005) Vol. 7, No. 3, pp. 373-382. print. ISSN: 1462-5814 (ISSN print).
- DT Article
- LA English
- ED Entered STN: 27 Apr 2005 Last Updated on STN: 27 Apr 2005
- AB The toxin complex (tc) genes of bacteria comprise a large and growing family whose mode of action remains obscure. In the insect pathogen Photorhabdus, tc genes encode high molecular weight insecticidal toxins with oral activity against caterpillar pests. One protein, TcdA, has recently been expressed in transgenic plants and shown to confer insect resistance. These toxins therefore represent alternatives to toxins from Bacillus thuringiensis (Bt) for deployment in transgenic crops. Levels of TcdA expression in transgenic plants were, however, low and the full toxicity associated with the native toxin was not reconstituted. Here we show that increased activity of the toxin TcdA1 requires potentiation by either of two pairs of gene products, TcdB1 and TccCl or TcdB2 and TccC3. Moreover, these same pairs of proteins can also cross-potentiate a second toxin, TcaAlBl. To elucidate the likely functional domains present in these large proteins, we expressed fragments of each 'toxin' or 'potentiator' gene within mammalian cells. Several domains produced abnormal cellular morphologies leading to cell death, while others showed specific phenotypes such as nuclear translocation. Our results prove that the Tc toxins are complex proteins with multiple functional domains. They also show that both toxin genes and their potentiator pairs will need to be expressed to reconstitute full activity in insect-resistant transgenic plants. Moreover, they suggest that the same potentiator pair will be able to cross-potentiate more than one toxin in a single plant.

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